

POWERGUARD[®] FLEX

CSA certified HDPE dual-walled corrugated conduit
approved for electrical installations



 **dura·line**

An Orbia Connectivity Solutions business.

WHY CHOOSE POWERGUARD FLEX?

Dura-Line's PowerGuard® Flex is your guarantee of quality, produced to the exacting standards of CSA C22.2 No. 327 and aligned with the Canadian Electrical Code.

PowerGuard Flex

Is produced in Canada to meet or exceed a minimum **cell classification** of PE334420C or PE334420E

Is suitable for use with both **low- and medium-voltage cables**

Has equivalent use cases to **Type DBII PVC conduit** but in reels or coils, not sticks

Has the strength of rigid PVC conduit for direct buried applications and is **up to 40% lighter**

Can be direct buried (via trenching or plowing) or used above ground in concrete encasement applications

Features a **corrugated outer layer for flexibility** (reducing or eliminating bends and sweeps) and a smooth inner layer for low-friction cable pulling

POWERGUARD FLEX BENEFITS

- ✓ Manufactured in Canada
- ✓ Will not exhibit the cracking or breakage associated with PVC conduit
- ✓ Can be installed at a lower temperature than PVC conduit
- ✓ Does not require manufactured bends - allows the conduit to be navigated around unexpected obstructions in the ground and withstand ground shifts
- ✓ HDPE is also highly resistant to acids, chemicals, and corrosive substances
- ✓ Allows the use of power cables in long, continuous runs
- ✓ Long continuous runs of conduit virtually eliminate the need for couplers and cement
- ✓ Multiple reels of product can be pulled into a trench or duct bank simultaneously to improve installation efficiency
- ✓ Can be coupled to HDPE, PVC, FRE, and TGS conduit with CSA-certified key lock couplers
- ✓ HDPE is considered more environmentally friendly than PVC due to its recyclability and lower environmental impact in terms of production and disposal



POWERGUARD FLEX FEATURES

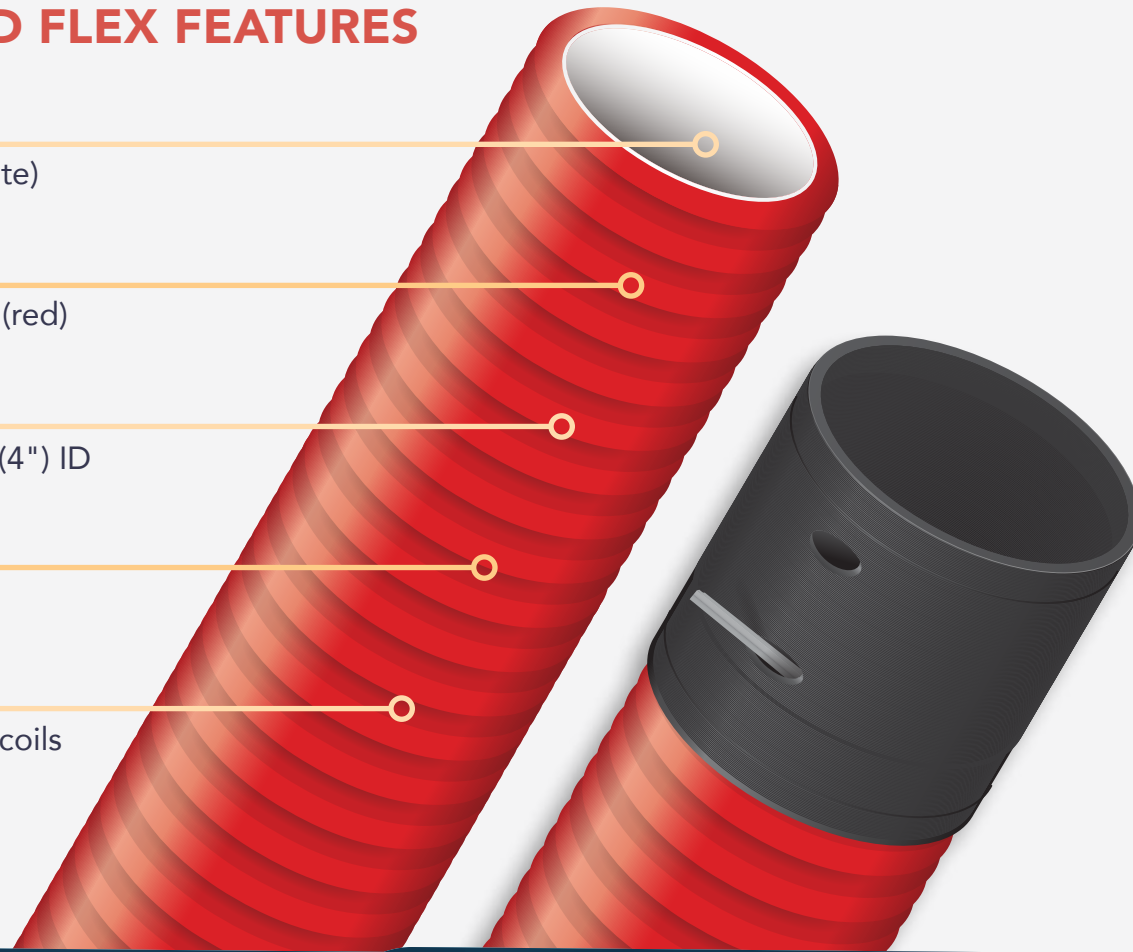
Smooth inner layer (white)

Corrugated outer layer (red)

Available with 130 mm (4") ID

CSA certified

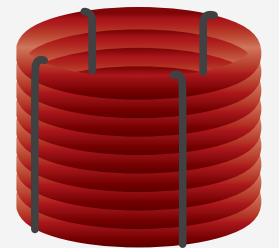
Available on reels or in coils



ORDER REFERENCE

POWERGUARD FLEX TECHNICAL SPECIFICATIONS

Dual Wall Size	103 mm (4")	
(A) OD	120.4 mm (4.74")	
(B) ID	100.6 mm (3.96")	
(C) Corrugation Width	12.4 mm (0.49")	
Nominal Combined Wall Thickness	9.9 mm (0.39")	



Ductility: HDPE conduit will better resist brittleness with age or cold temperatures



Temperature Versatility:
 ▶ HDPE conduit can be installed and operated over a temperature range of -40°C to 82°C (-40°F to 180°F)



Flexibility: HDPE conduit bends and flexes without breakage, even when the ground shifts or heaves

▶ PowerGuard Flex is designed for electrical cables in applications where the system's operating temperature does not exceed above the aforementioned upper limit



Continuous Length: can be wound onto reels over 300 m (1,000 ft.) long, or packaged in coils

▶ Power conductors rated at 90°C and medium-voltage cables rated at 105°C are permitted for use while ensuring that cable operating conditions do not result in conduit temperatures above the upper limit stated above



Versatility: Can be deployed using a wider variety of installation methods than PVC conduit

POWERGUARD® FLEX PACKAGING

SIZE	LENGTH (M/FT.)	PACKAGING	TOTAL PACKAGING WEIGHT	DURA-LINE PART NUMBER
103 mm (4")	76.2 m / 250'	Coil	150 lbs	10095749
103 mm (4")	365.8 m / 1,200'	102" Reel	985 lbs*	10095750

*(1,200 ft. x 0.6 lbs/ft product weight + 265 lbs reel weight)

Approved to the CSA C22.2 No.327: "HDPE Conduit, Conductors in Conduit, and Fittings."

This standard applies to High Density Polyethylene (HDPE) conduit with conductors (C.I.C.) and fittings, or direct burial or encasement in concrete or masonry in ordinary (non-hazardous) locations.

Field bends can be made without the use of external heaters, blankets or tools. Table 8 of CSA C22.2#327:2018 specifies the following bending radius by conduit diameter: 12-1258 Field bends for 103mm (4"), required bend radius is 406mm (16"), when bent around a mandrel and proofed at 75% ID.

1 meter = 3.28 feet

ACCESSORIES

Dura-Line offers a complete line of couplers, tools, hardware, Bull-Line pull tapes, lubricants, sealants, and accessories designed to make your cable installation highly successful.

Highlighted below are a few of our most popular products.

Please visit our website or contact your sales representative for more details.



BULL-LINE™ PULL TAPE

- ▶ Economical, pre-lubricated tape reduces friction-induced heat associated with pulling heavy cables into conduit
- ▶ Lowest burn-through resistance, easily jetted into conduit
- ▶ Accurate sequential foot or meter markings
- ▶ Locatable tracer wire option
- ▶ Available on reels in a wide variety of lengths
- ▶ Available as Bull-Line Bucket: polyester pull tape spooled in a 3.5-gallon bucket for convenient storage, transportation, and handling (tensile ratings 500, 1,250, 1,800, and 2,500 lbs.)



HYDRA-SEAL SEALANTS

- ▶ Designed and developed with high-performance properties, yet safe and user-friendly. Available with a variety of complimentary accessories.



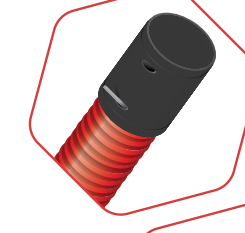
LUBRICANTS

- ▶ Formulated to meet specific requirements, our lubricants are available in a wide range of polymer and silicone-modified formulations in gel, creamy gel, or pourable forms.
- ▶ We offer a lubricant to match the type and weight of cable to be placed. Our lubricants are available in summer and winter grades.



POWERGUARD FLEX ADAPTERS AND COUPLERS

- ▶ PowerGuard Flex Coupler Kit joins PowerGuard Flex to PowerGuard Flex
- ▶ PowerGuard Flex Adapter Kit joins PowerGuard Flex to HDPE, PVC, FRE, and TGS
- ▶ PowerGuard Flex DB2 Adapter Kit joins PowerGuard Flex to DB2 PVC
- ▶ PowerGuard Flex Coupler Kits include an O-ring gasket creating an air-tight and water-tight seal
- ▶ Keylock strips secure the connection, no glue required



DUCT SPACERS

- ▶ Used to support duct arrays within trenches, duct spacers can support heavy loads in direct bury applications, while still being lightweight and easy to assemble by hand.
- ▶ Made from high-impact polymers and available in intermediate and base configurations that snap into place.

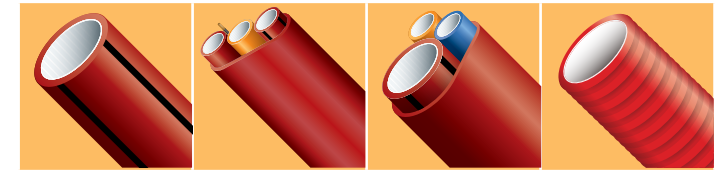


VINYL CAPS

- ▶ Used as a dust or dirt cover, protecting entry by any foreign objects and protecting inner contents from disturbance.
- ▶ Flexible for easy installation, with excellent stay ability.



POWERGUARD FAMILY OF PRODUCTS



FEATURES	POWERGUARD	POWERGUARD PLUS	POWERGUARD HYBRID	POWERGUARD FLEX
Made in Canada	•	•	•	•
SILICORE® ULF Lining	•	•	•	
Flexible CSA-Listed HDPE Resin Reduces Sweeps and Bends	•	•	•	•
Installation in Cold Climates	•	•	•	•
Long-Term Protection from Shifting Ground, Rock, and Root Impingement	•	•	•	•
Available with Pre-Installed Tape from 500 lb. – 6000 lb. Tensile Strength	•	•	•	
Suitable for use with Low- and Medium-Voltage Cables	•	•	•	•
Can be Installed Everywhere CSA-Certified PVC Conduit or Duct can be Installed Underground	•	•	•	•
Easily Adapts to Other Conduit Materials	•	•	•	•
Glue-less Coupling	•	•	•	•
Direct Bury or Concrete Encasement	•	•	•	•
Produced to the CSA Standards of C22.2 NO.327 for Electrical Applications	•	•	•	•
Open Trench	•	•	•	•
Plowing	•	•	•	•
Horizontal Directional Drilling	•	•	•	
Smooth Outer Wall	•	•	•	
Longitudinal Inner Ribs	•	•	•	
Available with Pre-Installed 20 AWG. Insulated Tracer Wire	•	•	•	
Multiple Pathways for Electric and Fibre		•	•	
Available in 16 mm (1/2") to 325 mm (12"). Comes standard in long continuous lengths on reels (for 103 mm (4") and below) 129 mm (5") - 325 mm (12") is available in trade length sticks 3.048 m (10'), 6.096 m (20')	•			
Available in 3-Way Configuration of 27 mm (1") SCH 40 HDPE Conduit Bundled with a Polyethylene Over Sheath		•		
Available in 3-Way Configuration of one 53 mm (2") SCH 40 HDPE Conduit with two 18/14 mm MicroDucts.			•	



1964 Muskoka Beach Road
Gravenhurst, ON P1P 1R1 Canada
Phone: (705) 646-5589

www.duraline-canada.com